

REMARKS

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by WO00/62356 (hereinafter: "Ura"). Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ura in view of Coetzer (U.S. Patent No. 6,007,943) (hereinafter: "Coetzer").

The Office, as it is permitted to do when reasonable, appears to be broadly interpreting the limitations of the claims. The limitation: "a current collector plate is connected to an edge of an electrode of the electrode unit", which does not specifically recite that the collector plate is in contact with the edge of an electrode of the electrode unit, is apparently being interpreted as reading on the contact of the collectors (8) and (9) of Fig. 1 of Ura with the collector plates (1) and (2) through the current collectors (1b) and (2b). The limitation "one or more than one connecting piece which is protrusively formed on a surface of the current collector plate is welded to a base portion of the terminal assembly" is being interpreted as reading on the connecting strip (8a) of the current collector (8) of Ura. Similar broad interpretations are being given to the limitations of claims 2 and 3.

Claim 1 has been amended to avoid the 35 U.S.C. § 102 and 35 U.S.C. § 103(a) rejections by reciting that the one or more than one connecting piece which is(are) protrusively formed on a surface of the current collector plate is(are) formed "on a side of said current collector plate not connected to [an] edge of an electrode" and is welded to a base portion of the terminal assembly "to form a weld extending in the direction of the axis of the electrode unit". A new claim, claim 4, which corresponds substantially to claim 1 as amended, but recites that a current collector plate directly contacts an edge of an electrode at one end of the electrode unit to electrically connect the electrode unit to the terminal assembly, has been added to the application.

In the battery of the present invention, a path between the connecting piece(s) and terminal assembly is shortened (as compared to a conventional battery as shown, for example, in Fig. 13 of the application) by forming the connecting piece(s) protrusively on the on a side of a current collector plate not connected to an edge of an electrode of the electrode unit, and the connecting piece(s) and terminal assembly are welded in a direction perpendicular to an axis of the body of the electrode unit to form a weld extending in the direction of the axis of the electrode unit. Electro resistance is reduced by shortening the current path (see paragraph

[0007]) and volume efficiency is increased by reduction of dead space inside of the battery (see paragraphs [0008] and [0010]).

Additionally, the connecting piece(s) and terminal assembly are welded at a location where air leakage efficiency of the battery is not effected. Therefore, there is no leakage of liquid due to pinholes created during welding. With the structure of the battery of the battery of the present invention it is possible to reduce electrical resistance, and to increase volume efficiency and productivity.

In Ura, a positive electrode current collecting plate 8 and negative electrode current collecting plate 9 are respectively connected to a battery closure 6 and battery case 5. Connecting strips 8a and 9a respectively extending from the outer circumference of the current collecting plates 8 and 9 connect them to the inside surface of the battery closure 6 and the inside bottom surface of the battery case 5, respectively. Therefore, welding is not in a direction perpendicular to an axis of the body of the electrode unit and a weld extending in the direction of the axis of the electrode unit is not formed.

In the battery of Ura, similar to the conventional battery illustrated in Fig. 13 of the present application, the length of the current path of the electrode unit and the battery closure is

long because the battery, in addition to using current collectors 1b and 1b, uses a connecting strip 8a as a means for connecting the electrode unit and the battery closure. The long current path increases internal resistance and decreases battery volume efficiency.

Ura, in view of the differences explained above, is insufficient to support a rejection under 35 U.S.C. § 102 of claim 1 as amended and is insufficient, alone or in combination with Coetzer, to support a case of *prima facie* obviousness of claims 2 and 3 under 35 U.S.C. § 103(a). Removal of the 35 U.S.C. § 102 and 35 U.S.C. § 103(a) grounds of rejection is in order.

The foregoing is believed to be a complete and proper response to the Office Action dated January 6, 2006, and is believed to place this application in condition for allowance. If, however, minor issues remain that can be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number indicated below.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

PATENT APPLN. NO. 10/633,418
RESPONSE UNDER 37 C.F.R. §1.111

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In the event any additional fees are required, please also
charge our Deposit Account No. 111833.

Respectfully submitted,
KUBOVCIK & KUBOVCIK

A handwritten signature in black ink, appearing to read 'Ronald J. Kubovcik', is written over the printed name.

Ronald J. Kubovcik
Reg. No. 25,401

Atty. Case No. SNY-038
The Farragut Building
Suite 710
900 17th Street, N.W.
Washington, D.C. 20006
Tel: (202) 887-9023
Fax: (202) 887-9093
RJK/KTK/jbf